



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/702,618 | 11/07/2003 | Toyoji Gushima | P24532 | 8502 |

7055 7590 04/10/2007
GREENBLUM & BERNSTEIN, P.L.C.
1950 ROLAND CLARKE PLACE
RESTON, VA 20191

| |
|----------|
| EXAMINER |
|----------|

BIBBINS, LATANYA

| | |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2627

| SHORTENED STATUTORY PERIOD OF RESPONSE | NOTIFICATION DATE | DELIVERY MODE |
|--|-------------------|---------------|
| 2 MONTHS | 04/10/2007 | ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 2 MONTHS from 04/10/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com
pto@gbpatent.com

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/702,618 | Applicant(s) GUSHIMA ET AL. | |
| | Examiner LaTanya Bibbins | Art Unit 2627 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-23 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☒ Claim(s) 1-4 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119 -

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In the remarks filed on January 5, 2007, Applicant amended claims 1, 2, 5-9, and 11-22 and submitted arguments for allowability of pending claims 1-23.

Response to Arguments

2. Applicant's arguments, filed January 5, 2007, with respect to claims 1-23 have been fully considered and are persuasive. The rejections of claims 1-23 have been withdrawn.

Specification

3. The disclosure is objected to because of the following informalities:

The recitation of "**rectifying an error** according to the detected synchronization code" and "**a rectifier** that rectifies an error according to the detected synchronization code," in claims 11 and 17 respectively, is not disclosed in the specification. There is insufficient antecedent basis in the specification for this limitation in the claim.

Appropriate correction is required.

Claim Objections

4. Claims 1-4 are objected to because of the following informalities:

Claims 1 and 2 recite the limitation "the memory address." There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the data memory address." There is insufficient antecedent basis for this limitation in the claim.

Claim 4 recites the limitation "the data recording format." There is insufficient antecedent basis for this limitation in the claim.

Appropriate correction is required.

Allowable Subject Matter

5. Claims 1-23 are allowed.

Regarding claims 1-10, none of the references of record, alone or in combination, suggest or fairly teach a playback method, a playback control circuit, or a playback apparatus for a recording medium to which data is recorded in block units containing multiple fixed-length frames and block address information is pre-recorded, the playback method comprising: acquiring the data from a first playback signal from the recording medium; acquiring the block address information from a second playback signal based on pre-recorded block address information from the recording medium; **predicting the recording position of each frame in a block from the acquired block address information; synchronizing to a frame level based on the acquired data; determining the memory address for storing the data acquired based on the predicted recording position; and storing the acquired data at the determined memory address** in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper.

Regarding claims 11-23, none of the references of record, alone or in combination, suggest or fairly teach a playback method, a playback control circuit, or a playback apparatus for reproducing data from a recording medium to which is recorded modulated frame data and a specific synchronization code prepended to the beginning of the modulated frame data, the modulated frame data being error correction coded data segmented into multiple frame data blocks of a specific length and then modulated, the playback method comprising: acquiring signals from the recording medium; acquiring a detection result of synchronization code by detecting frame synchronization codes from the acquired signals; correcting frame synchronization based on the result for detection of acquired synchronization code; **generating a result information for detection of synchronization code coded according to specific rules from the detection result of synchronization code; demodulating the modulated frame data for each frame and generating demodulated frame data; adding the result information for detection of synchronization code for each frame to the corresponding demodulated frame data; and rectifying an error according to the detected synchronization code** in such a manner that a rejection under 35 U.S.C. 102 or 103 would be proper.

Citation of Relevant Prior Art

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gushima et al. (US Patent No. 7,158,464 B2), discloses a recording medium comprising a recording area, the recording area includes a first area and a second area, the first area includes a frame area, the frame area includes an area in which a second synchronization code sequence and at least a portion of data are to be recorded, and the second area includes an area in which a third synchronization code sequence and a fourth synchronization code sequence are to be recorded.

Saito et al. (US Patent No. 5,589,995), discloses an apparatus for recording and reproducing a burst-like digital information signal, a method capable of predicting the time of occurrence of a header indicating the beginning of the first data of a digital information signal during its reproduction from a recording medium. The digital signal includes a plurality of data blocks, each including a first header indicative of the head of the block, and each first header including the address of the block. During recording of a digital signal on the recording medium, a plurality of second headers, which are substantially the same as the first headers of the data blocks and including addresses having given relations with the addresses of the data blocks, are inserted in a clock regenerating signal recorded before the digital signal for regenerating the clock for the signal. The second headers are inserted at a period equal to the period of each data block so as to be synchronized with the headers of the data blocks.

Tanaka et al. (US Patent No. 5,881,037), discloses a digital video disk which stores data codes and multifunctional synchronization codes in a data structure. The synchronization codes contain type information code identifying whether the synchronization code is located in a code sequence at the beginning of the data block,

the beginning of a data block sector other than the first sector in the data block, the beginning of a line, or the middle of a line. The type information is expressed by two alternative patterns, type information code 1 and type information code 2, expressing the same information and differing in the number of 1s in the 5-bit sequence, i.e., an odd or even number of 1s. Which one of the two type information code pattern is used is selected according to the DSV so as to minimize bias in the dc component of the frame following the synchronization code.

Hayashi et al. (US PGPub No. 2001/0006499 A1), discloses a data recorder for recording data that records data in a continuous manner regardless of interruptions. An encoder encodes data that is to be written to a recording medium. A synchronizing circuit synchronizes the data read from the recording medium with the encoded data when the writing of data to the recording medium is interrupted. A first retry determination circuit determines whether an address of the data read from the recording medium and an address of the data provided to the encoder match. A second retry determination circuit determines whether the timing for reading data from recording medium and the timing for encoding data match. A restart circuit restarts the writing of data to the recording medium based on the determinations of the first and second retry determination circuits.

Conclusion

7. This application is in condition for allowance except for the formal matters discussed above.

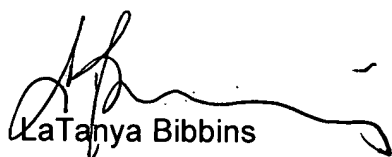
Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

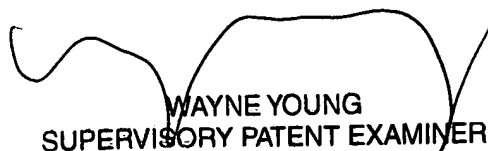
A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaTanya Bibbins whose telephone number is (571) 270-1125. The examiner can normally be reached on Monday through Friday 7:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


LaTanya Bibbins


WAYNE YOUNG
SUPERVISORY PATENT EXAMINER